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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

YIGDALL, MICHAEL J

ART UNIT

PAPER NUMBER

2122

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action**Application No.**

09/964,763

Applicant(s)

ROBISON, ARCH D.

Examiner

Michael J. Yigdall

Art Unit

2122

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 12 August 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-26.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

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Continuation of 5:

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981) and *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant asserts that Archambault does not disclose or suggest a code segment having a plurality of instructions including a number of pointers wherein at least one of the pointers is a restricted pointer (page 9, lines 13-15). Applicant further asserts that Blainey does not disclose or suggest a code segment having a plurality of instructions including a number of pointers wherein at least one of the pointers is a restricted pointer (page 10, lines 1-3). Applicant acknowledges that Robison discloses the use of restricted pointers in C and C++ (page 10, line 4 and page 11, line 10), but similarly asserts that Robison does not disclose or suggest a code segment having a plurality of instructions including a number of pointers wherein at least one of the pointers is a restricted pointer.

However, Archambault discloses receiving a code segment that includes a plurality of pointer instructions and determining sets of aliases among the pointers (see column 5, lines 4-17). Blainey discloses determining such alias information based on language rules, language features and assertions made by the programmer (see column 2, lines 40-46). Robison discloses an example of such language features, specifically restricted pointers and the use of the "restrict" keyword as an assertion made by the programmer in pointer declarations (see the "Restrict Qualifies Pointers" section). Therefore, in combination, Archambault, Blainey and Robison suggest a code segment having a plurality of instructions including a number of pointers wherein at least one of the pointers is a restricted pointer.

In response to Applicant's argument that there is no suggestion to combine the references (page 11, lines 3-12), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Archambault discloses that the alias sets are made precise to improve optimization in a compiler (see column 3, lines 12-18). Blainey likewise discloses that alias information is used for optimization in a compiler (see column 3, lines 26-29), and discloses that precise alias information can be determined based on language rules, language features and assertions made by the programmer (see column 2, lines 40-46). Robison discloses that restricted pointers, an example of such language features, address problems associated with aliases and improve the performance of programs written in the C and C++ languages (emphasis provided; see the "FORTRAN Envoy" and "Conclusion" sections). Improving performance is analogous to optimizing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the Archambault system to employ language rules, language features and programmer assertions to precisely determine aliases and alias sets, as taught by Blainey, including the language feature of restricted pointers disclosed by Robison, for the purpose of optimizing and improving performance as suggested by each of the references.

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ANTHONY NGUYEN-BA
PRIMARY EXAMINER

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